

Curriculum Vitae
Ann Marie Gordon

Work Address:
Washington State Toxicology Laboratory
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Education:

BA in Genetics; University of California at Berkeley. June 1974.

MS in Microbiology and Immunology; University of California at Berkeley.
December 1980.

Thesis Title: The Nature of Serum Bactericidal Reaction Against *Neisseris*.
Thesis Advisor: Professor Neylan A. Vedros

PhD. Candidate in Microbiology and Immunology; University of California at Berkeley.
Dissertation not completed

Thesis Title: Bacterial Protoplast Fusion as a Technique to analyze *Neissera*.
Thesis Advisor: Professor Neylan A. Vedros

Forensic Toxicology Work Experience:

November 2000 – present - Laboratory Manager, Washington State Toxicology Laboratory.
2203 Airport Way S., Suite 360, Seattle, WA 98134

Responsible for the day to day operations of the laboratory. Responsible for reviewing all Laboratory data and signing out the final reports. Responsible for the quality control programs, internal and external. Responsible for hiring, training and supervision of all laboratory personnel. Responsible for the laboratory budget. Provide expert witness testimony for the laboratory and consult with medical examiners, coroner's, prosecutors and defense attorneys to aide them in the interpretation of toxicology reports of the laboratory's findings. Interface with the Breath Test Section and the Drug Recognition Expert Program of the Washington State Patrol.

Jan 1998 – October 2000 - Forensic Toxicologist, Washington State Toxicology Laboratory,
2203 Airport Way S., Suite 360, Seattle WA 98134

Perform analytical toxicology on human samples in DUI investigations and death investigations. Testify in court on results and related forensic toxicology issues. Prepare and certify drug standards and quality control samples. Manage external quality control participation. Analyze quality control data for trends.

Forensic Toxicology Work Experience (continued):

May 1994 – October 1997, Director, Quality Assurance, Psychomedics Corporation, 5832 Uplander Way, Culver City, CA 90230

Developed a comprehensive quality assurance program where only a rudimentary and unutilized program pre-existed. Was the first Quality Assurance Director at the laboratory and successfully met the corporate goal of obtaining several national laboratory certifications (New York State and CAP). My responsibilities included writing detailed Standard Operating Procedures (SOPs) for all technical areas of the laboratory including sample accessioning and handling, sample preparation for all matrices, screening by RIA and EMIT, confirmation (extraction and GCMS or GCMSMS analysis). Established a comprehensive data review system including the training of certifying scientists. Established a comprehensive QC program, including increasing the number of quality control samples from approximately 1% of caseload to approximately 10% of analyzed samples and establishing quality control criteria where none existed, including rejection criteria (in a laboratory where an entire batch of data had never previously been rejected).

Responsible for the daily technical operation of this private drug testing laboratory with a technical staff of 60 – 70 employees, which grew from 3-500 samples per day to as many as 3000 samples per day during my tenure with very little increase in staffing. Completely revised the workflow to introduce automation to a laboratory in which all technical work had been performed manually. Focused the laboratory's attention toward a faster turn around time on negative samples (from 2-3 days to approximately 18 hours) and more attention and effort to ensure the accuracy and reproducibility of positive samples. Increased the forensic supportability of the data results and revised the testing to include performing two independent analyses (screening and confirmation) on different aliquots of the sample with no increase in turn around time. During the absence of critical staff or in critical staff shortages, performed bench work as needed, including acting as the back-up TSQ GCMSMS operator for almost 1 year.

Developed a comprehensive data review system and for 2 years was the primary responsible party for the review of all positive results. Incorporated QC result evaluation and rejection criteria into the data review system. Used the data review system and an existing retest program as a QA tool to identify analytical and forensic laboratory problems and troubleshoot procedural difficulties (RIA and EMIT screening and GCMS confirmation) and employee performance. Implemented changes to preclude repetition of problems. The outcome was that false positive results ceased to be a problem. Insured forensically acceptable documentation of all specimen handling.

Developed a Litigation Support System, including a Litigation Support Packet and expanded an existing retest program. Developed a systematic approach to retest samples and took advantage of the technology, which permits a second sample to be collected from the subject at later date to confirm original findings. Reviewed and certified all Litigation Support packets requested by clients. Provided expert witness testimony for the laboratory in more than 15 different states (including Florida, Oregon, California, New York and Nevada) and in a multitude of venues (unemployment hearings, child protective services hearings, parole violation hearings, to name a few). Interacted with corporate attorneys and client attorneys to insure the best presentation of the data in court.

Gave technical lectures on employee drug testing to Association of Unemployment Hearing Officers, union representatives and for a National Medical Review Officer course.

Forensic Toxicology Work Experience (continued):

Extensively interacted with Medical review Officers and human resource personnel in assisting them with the interpretation of results and retest results. Prepared and

delivered a presentation for SAMSHA national conference on alternative drug testing technologies on the establishment of a quality control program in the forensic hair drug testing laboratory.

Successfully obtained New York State Forensic Drug Testing certification, CAP certification, (both of which were subjected to on-site inspections) and other state certifications (not requiring onsite inspections) and maintained CLIA certification (onsite inspection). Several large (Fortune 500) clients also had their own inspection programs for which I was the responsible party for interacting with the inspector. Also provided laboratory tours for clients including technical personnel, technical consultants and MROs for large clients.

Worked extensively with a computer software design team to develop and implement a new laboratory information management system (LIMS) and was intimately involved in alpha and beta testing of the LIMS (however, I left this position before final implementation of the new LIMS).

Responsible for personnel problems within the laboratory and was one of a team of 3 responsible for the hiring (and occasional firing) of technical staff. Developed an in-service training program and successfully converted long-time employees to approach the testing in a forensically supportable manner with proper in house chain of custody and quality control/assurance procedures.

Managed the budget for my department and was part of the budgetary management team which critically evaluated current and future expenditures for cost-benefit to overall laboratory operations.

November 1992 – May 1994. Chief, Litigation Support & Assistant Chief Quality Assurance U.S. Army Forensic Drug Testing Laboratory Fort Meade, MD

As Assistant Chief of Quality Assurance, assigned and reviewed the case work of 7 toxicologists. Managed the litigation support section, including 2 litigation support clerks. Developed a litigation support packet to increase the information provided in pending litigation (resulting in a decrease in the number of appearances required by expert witnesses) reviewed and certified more than 60 litigation packets per week, testified in more than 250 court cases. Developed an expert witness training program and trained 3 toxicologists to provide expert witness testimony in administrative hearings and courts martial.

Conducted QA audits in all technical areas of the laboratory for forensic acceptability of procedures and SOP compliance. When actual procedures differed from written SOPs evaluated the situation for forensic acceptability and workflow efficiency. When the day to day procedure was deemed better, rewrote SOPs to reflect the actual procedures performed; when they were deemed unacceptable, conducted in-service training to educate laboratory personnel regarding the need for SOP compliance and forensic justification. Conducted mock courts martial and took laboratory personnel to hear my

Forensic Toxicology Work Experience (continued):

testimony in local courts in order to increase their understanding of the importance of SOP compliance.

Wrote the Quality Assurance SOP including data review and litigation support sections (previously did not exist). Helped prepare the laboratory for quarterly DOD inspections.

Reviewed and certified positive drug test results at a high volume drug testing laboratory. Re-analyzed GCMS data, as needed. Reviewed the data for accuracy and consistency and to identify problem areas. Made recommendations for procedural and analytical changes to improve the quality of the data.

September 1988 – November 1992 – Laboratory Certifying Scientist and Expert Witness
U.S. Army Forensic Toxicology Drug Testing Laboratory, Wiesbaden, Germany.

Reviewed and certified positive drug test results at a high volume drug testing laboratory. Re-analyzed GCMS data, as needed. Reviewed the data for accuracy and consistency and to identify problem areas. Made recommendations for procedural and analytical changes to improve the quality of the data. Provided expert witness testimony in U.S. Army and U. S. Air Force courts martial and administrative hearings. Conducted in-house quality assurance reviews of the laboratory in preparation for quarterly DOD inspections.

Teaching Experience:

January 1988 – November 1992 – College Instructor. City Colleges of Chicago. – European Division. Taught undergraduate general science course, including General Biology 101 & 102; Human Biology 104; Man & His Environment (Environmental Studies) 101; Anatomy & Physiology 112 & 112L; General Chemistry 101 & 102.

March 1987– June 1989 – Substitute Teacher for DODDs, Germany Division. Mainly taught Science courses, including a long-term assignment for college preparatory chemistry and physics.

March 1988 – April 1989 – College Instructor. University of Maryland – European Division.
Taught General Biology

January 1985 – May 1985 and March - June 1980– Teaching Associate for Medical Microbiology Laboratory, UC. Berkeley.

January 1983 – May 1984 – Tutor for Graduate Minority Division, U.C. Berkeley. Tutored graduate students in medical microbiology and medical immunology courses.

September 1979 – December 1979 – Teaching Assistant for Medical Virology Laboratory, UC. Berkeley.

Research Experience:

June 1984 – December 1984 Junior Scientific Specialist – Marine Mammal Grant with Dr. Neylan A. Vedros, U.C. Berkeley. Preparation of a carbohydrate vaccine against *Pseudomonas pseudomallei* for marine mammals and ELISA studies of serum from vaccinated animals.

Research Experience (continued):

January 1984 – June 1984 Research Associate – Teaching Improvement Grant U.C. Berkeley. Developed a teaching module for individual study of light microscopy principles and techniques.

January 1978 – October 1983 Research Associate – *Neisseria* Grant with Dr. Neylan A. Vedros, U.C. Berkeley. Prepared antisera in rabbits and other animals and performed *in vivo* and *in vitro* studies on the pathogenesis of *Neisseria meningitidis*.

July 1977 – January 1979 Lab Assistant and Research Associate – Naval Biosciences Research Laboratory, U.C. Berkeley. Prepared antisera and typed meningococcal species from military recruits and cases of meningococcal meningitis.

Additional Training:

“New Analytical Methods” Agilent Workshop, August 29, 2004, Washington DC

“Statistics and Method Validation” FBI Laboratory Symposium on Forensic Toxicology, August 29, 2004, Washington, D.C.

“New and Unique Technologies for Forensic Toxicology Laboratories” FBI Laboratory Symposium on Forensic Toxicology, August 29, 2004, Washington, D.C.

“Advanced Mass Spectrometry Theory and Interpretation” FBI Laboratory Symposium on Forensic Toxicology, August 30, 2004, Washington, D.C.

“SOFT/AAFS Guidelines and Forensic Laboratory Accreditation” FBI Laboratory Symposium on Forensic Toxicology, August 30, 2004, Washington, D.C.

“Tryptamines and Other Psychotropic (Mind Altering) Substances: Analysis, Toxicology and Pharmacology”. American Academy of Forensic Sciences, February 2004, Dallas, TX

“Ephedrine: Drug or Supplement? Ephedrine Related Compounds and the Debate on Their Potential for Contribution to Injury” American Academy of Forensic Sciences, February 2004, Dallas, TX

“Application of the Principles of Pharmacology and Pharmacokinetics to the Interpretation of Drug Blood Levels” American Academy of Forensic Sciences, February 2004, Dallas, TX

“Death Dealing Caregivers” American Academy of Forensic Sciences, February 2003, Chicago, IL

“Clinical Chemistry and Forensic Toxicology – A Symbiotic Relationship in Death Investigations” American Academy of Forensic Sciences, February 2003, Chicago, IL

“Antipsychotics – Medicine for the mind” American Academy of Forensic Sciences, February 2003, Chicago, IL

Additional Training (continued):

"DUID – From Research to the Courts" Society of Forensic Toxicology, October 2002, Dearborn, MI

"Aspects of Human Growth and Development" Society of Forensic Toxicology, October 2002, Dearborn, MI

"Pharmacology and Toxicology of Brain Drugs" Society of Forensic Toxicology, October 2002, Dearborn, MI

"Medicolegal Death Investigation" Society of Forensic Toxicology, October 2002, Dearborn, MI

"Managing Diversity" HELP Academy Management Module E February 21, 2002, Seattle, WA

"Herbal Medicines" Society of Forensic Toxicology, October 2001, New Orleans, LA

"Ethanol Workshop" Society of Forensic Toxicology, October 2001, New Orleans, LA

"Drugs that Impair Driving" NHSTA – DOT Course August 10, 2001, Seattle, WA

"DWI Detection and Standardized Field Sobriety Testing" NHTSA – DOT Course, August 8 – 9 2001, Seattle, WA

"Hiring, Performance & Corrective" Action Help Academy Management Module A Washington State March 12 – 13, Seattle, WA

"The Agony of Ecstasy" American Academy of Forensic Sciences, February 2001, Seattle, WA

"Drugs and Driving Workshop" American Academy of Forensic Sciences, February 2001, Seattle, WA

"Drug Facilitated Sexual Assault" American Academy of Forensic Sciences, February 2001, Seattle, WA

"Pharmacology Reviews II: Cardiovascular Tox & Cardio genomics" Society of Forensic Toxicology, October 2000. Milwaukee, WI

"Benzodiazepines: Pharmacology & Analytical Challenges " Society of Forensic Toxicology, October 2000. Milwaukee, WI

"Marijuana Forensic Symposium" Society of Forensic Toxicology, October 2000. Milwaukee, WI

"Macro Writing – GCMS " Society of Forensic Toxicology, October 2000. Milwaukee, WI

"Drinking and Driving Under the Influence" Workshop, Texas A & M, May 2000

"Drugs and Driving" Society of Forensic Toxicology, October 1999, San Juan, Puerto Rico

"Pharmacology of Selected New Drugs" Society of Forensic Toxicology, October 1999, San Juan, Puerto Rico

Additional Training (continued):

“Rohypnol Detection” Society of Forensic Toxicology, October 1998. Albuquerque, New Mexico

“Practical Aspects of Chemical Ionization Mass Spectrometry for Drugs” Society of Forensic Toxicology, October 1998. Albuquerque, New Mexico

“Breath Alcohol Testing and Highway Safety” Supervisors and Expert Witness Course, Indiana University, May 1998

“Why Sample Mass Spectra and Library Search Don’t Match” Society of Forensic Toxicology, October 1997. Salt Lake City, Utah

“Forensic Application of LC/MS” Society of Forensic Toxicology, October 1997. Salt Lake City, Utah

“Fundamentals of Medical Examiner Toxicology – Analytical Methods” Society of Forensic Toxicology, October 1996. Denver, Colorado

“Pharmacology and Toxicology of New Drugs” American Academy of Forensic Sciences, February 1995. Seattle, WA

“Quality Assurance in the Forensic Laboratory” American Academy of Forensic Sciences, February 1995. Seattle, WA

“Fundamentals of Forensic Toxicology” A Basic Course Society of Forensic Toxicology, October 1995. Baltimore, MD

“International Conference on Hair testing for Drugs of Abuse” The International Association of Forensic Toxicologists, October 1994. Orlando, FL

“Current Approaches in Forensic Toxicology” The Forensic Toxicologist Certification Board, October 1994. Orlando, FL

“Mass Spectrometry – Forensic Applications” American Academy of Forensic Sciences, February 1994. San Antonio, TX

“Expert Witness Testimony” American Academy of Forensic Sciences, February 1994. San Antonio, TX

“Total Quality Management” US Air Force Regional Medical Center, June 1993, Wiesbaden Germany

“Forensic Urine Drug Testing”, University of Utah, Center for Human Toxicology August 1992, Salt Lake City, Utah

“Roche Radioimmuno Assay Course” US Army Drug Testing Laboratory, October 1989, Wiesbaden, Germany

Hewlett Packard – Gas Chromatography & Mass Spectrometry” US Army Drug Testing Laboratory, January 1990, Wiesbaden, Germany

Publications and Presentations:

(* = Invited Presentations)

"Methamphetamine Detection in Urine of Children Co-existing with Clandestine Methamphetamine Manufacturing" Ann Marie Gordon and Barry K Logan, Presented at Society of Forensic Toxicology Annual Meeting, August-September 2004, Washington DC

"Lorazepam and Death Investigation" Jayne Clarkson, Ann Marie Gordon and Barry K Logan, , Presented at Society of Forensic Toxicology Annual Meeting, August-September 2004, Washington DC

* "Toxicological Issues and Prosecution of the Alcohol Impaired Driver " Continuing Legal Education, Washington Association Of Prosecuting Attorneys, June 2004, Levensorth, WA

* "Forensic Toxicology Issues in Prosecution of the Drug Impaired Driver" American Research Institute Association, April 2004, Anchorage, AK

"Methadone Concentration and Concurrent Drug Findings in Three Populations: Methadone Treatment Patients, Impaired Drivers and Death Investigation Cases" Ann Marie Gordon, Simone Loew and Barry Logan– Presented at American Academy of Forensic Sciences, February 2004, Dallas, TX

* "Prosecutor Training on Toxicological Issues in Alcohol Impaired Driving Cases", Continuing Legal Education, Seattle, King County, Pierce County, Whatcom County, Clark County, Spokane County, Grant County, Thurston County 2002 - 2004

* "Prosecutor Training on Toxicological Issues in Drug Impaired Driving Cases", Continuing Legal Education, Seattle, King County, Pierce County, Spokane County 2003-2004

* "Toxicological Issues for the Alcohol Impaired Driving Cases" Continuing Legal Education, Assigned Council for the Accused, Seattle, Kent 2004

"Lorazepam and Driving Impairment", Jayne E. Clarkson, Ann Marie Gordon and Barry K Logan. J. Anal. Tox, 28:1:6. 2004

"Methadone and Driving", Ann Marie Gordon and Barry K. Logan, presented at "Forensic Toxicology of Methadone" Workshop, Society of Forensic Toxicologists Annual Meeting, Portland, OR, October 21, 2003

* "Death Investigations and Tricyclic Anti-depressants", in "Antidepressant Workshop" sponsored by Committee for Continuing Education, Society of Forensic Toxicologists Annual Meeting, October 22, 2003, Portland, OR

"Phencyclidine Drivers in Washington State", Ann Marie Gordon and Barry K. Logan, presented at Society of Forensic Toxicologists Annual Meeting, October 23, 2003, Portland, OR

"Lorazepam and Driving Impairment, Jayne E. Thatcher, Ann Marie Gordon, Barry K. Logan, Washington State Toxicology Laboratory, presented at Society of Forensic Toxicologists Annual Meeting, October 23, 2004, Portland, OR

* "Toxicological Issues for Drug Recognition Experts" at the Washington State Traffic Safety Meeting, December 2003, Skamania, WA

Publications and Presentations (continued):

"Driving Under the Influence of Ephedrine", Mary Wilson BS*, Pat Friel BS, Ann Marie Gordon MS, and Barry K. Logan PhD, Washington State Toxicology Laboratory, Seattle WA presented at Society of Forensic Toxicologists Annual Meeting, October 23, 2003, Portland, OR

"A Short Series of Deaths Involving MDMA", Barry K. Logan*, Ruth Luthi, Ann M. Gordon. Washington State Toxicology Laboratory, Forensic Laboratory Services Bureau, Washington State Patrol, Seattle WA, presented at Society of Forensic Toxicologists Annual Meeting, October 22, 2003, Portland OR

"Multiplexed CYP 2D6 *3 *4 and *5 Polymorphism - Real Time PCR for Application in Forensic Pathology/Toxicology Methamphetamine/MDMA Cases", Michael A. Wagner, Sameer Sakallah, Ann Marie Gordon and Barry K. Logan, presented at Society of Forensic Toxicologists Annual Meeting, October 24, 2003, Portland OR

"Death Following Long Term Fluoxetine Use", Dora Schranz, Simone Loew, Kathy Raven, Naziha Nuwayhid, Ann Marie Gordon, and Barry K. Logan, presented at Society of Forensic Toxicologists Annual Meeting, October 23, 2003, Portland OR

* "Toxicological Issues on Alcohol Impaired Drivers for Prosecutors", Continuing Legal Education, Washington Association of State and Municipal Attorneys, September 2003, Spokane, WA

* "Emerging Trends in Death Investigation Toxicology in Washington State", Washington Association of Coroners and Medical Examiners, September 2003, Seatac, WA

* "Methamphetamine and Death" presented at Methamphetamine Summit III, Vancouver, WA, September 15, 2003.

* "Driving Under the Influence of Drugs Update" Drug Recognition Expert Continuing Education Program, July 2003, Olympia, WA

* "Methamphetamine and Infant and Fetal Deaths" Governor's Methamphetamine Council, June 2003, Seattle, WA

"Methadone Findings in Drivers, Post-Mortem and Methadone Treatment Patients in Washington State" Ann Marie Gordon and Barry K. Logan Presented at SAMSHA CSAT Meeting on Methadone Associated Fatalities. May 8-9 2003, Washington, DC

"Methamphetamine in Fetal and Infant Deaths in Washington State" Ann Marie Gordon, Barry Logan and Kathy Raven – Presented at American Academy of Forensic Sciences, February 2003, Chicago, IL

"Significance of Cyclobenzaprine in Death Investigations and Impaired Drivers in Washington State" - Ann Marie Gordon and Barry Logan - Presented at Society of Forensic Toxicology, October 2002, Dearborn, MI J Analytical Toxicology 2003;27(3):198-199

"Methadone Findings in Drivers and Post Mortem Cases in Washington State" Ann Marie Gordon and Barry Logan Presented at Society of Forensic Toxicology, October 2000, Milwaukee, WI

Publications and Presentations (continued):

"Carisoprodol, Meprobamate, and Driving Impairment" Barry K. Logan, Glenn A. Case and Ann Marie Gordon. J Forensic Sci 2000;45(3)619-623

"Case Study: An Infant Death Involving Benzocaine" Presented at Society of Forensic Toxicology – International Association of Forensic Toxicologists Joint Meeting, Albuquerque, New Mexico

* "Quality Assurance in the Hair Drug Testing Laboratory" SMASHA Conference on Alternative Technologies, February 1997, Baltimore MD

* "Hair Testing and Quality Assurance" National Association of Unemployment Hearing Officers, June 1997, Tulsa OK

"Hair Testing for Detection of Drugs of Abuse" Thomas Cairns, Donald Kippenberger and Ann Marie Gordon in Analytical Therapeutic Drug Monitoring and Toxicology, edited by Steven Wong and Irving Sunshine 1997 CRC

"Spheroplast Fusion of *Neisseria meningitidis*" Ann Marie Gordon and Neylan A. Vedros @ American Society of Microbiology Annual Meeting. St. Louis, MO March 1984

"Strain Differentiation of *Neisseria species* by Enzyme PAGE" Peter C. Chun, Ann Marie Gordon, George F. Sensebaugh and Neylan A. Vedros @ American Society of Microbiology Annual Meeting. St. Louis, MO March 1984

"Protoplast Fusion of *Neisseria species*" International Conference on Cerebrospinal Meningitides. Marseilles, France. March 1983.

Appointments / Honors:

2004 – 2008	SAMSHA Drug Testing Advisory Board Member
2003	Scientific Co-Chair, Society of Forensic Toxicologists Annual Meeting, October 2003, Portland, OR.
2003	Chair, "Forensic Toxicology of Methadone" workshop, Society of Forensic Toxicologists Annual Meeting, October 21, 2003, Portland, OR
2004	Methamphetamine Summit IV. Panelist on the Drug Endangered Child Program, August 2003, Redmond, WA
2002-current	Member, SOFT Continuing Education Committee
2004	National Safety Council, Committee on Alcohol and Drugs and National Highway Traffic Safety Administration Meeting on "Improving Integration of DRE, Investigative and Toxicological Evidence in DUID Prosecutions", May 2004, Seattle, WA

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Memberships:

Society Of Forensic Toxicology

California Association of Toxicologists

American Academy of Forensic Sciences

References:

Available on request